WHAT WE CLAIM IS:

1. **A capping assembly** engageable with or engaged with a necked container, said assembly being or having

a first component in the form of a unitary moulding adapted to define a detachable overcap and at least a skirt, the skirt being adapted to engage or engaging the exterior of the neck of a suitable said container,

a second component located within said first component, and

a nozzle component carried through the second component yet moveable relative to the second component such that,

in one relative condition ("the non-dispensing condition"), the nozzle component together with the surrounding second component, is adapted to provide closure of the mouth of a suitable said container or provides closure of the container, and

in another condition ("the dispensing condition") of the nozzle component relative to the second component, is adapted to provide for such a suitable said container, or provides for the container, a liquid egress passageway,

and wherein the second component and the nozzle component, when in the non-dispensing condition, define together with the first component a fully enclosed space about part of said nozzle component.

2. A capping assembly of claim 1 wherein said skirt of the first component is internally threaded as the adaptation to engage or the means by which it is engaged with the exterior of the neck of a suitable said container.

3. An assembly as claimed in claim 1 or 2 wherein said first component includes a tear strip or other frangible feature whereby the detachable overcap can be separated from the skirt thereby to allow access to that part of said nozzle component hitherto presenting to said closed space.

4. An assembly of any one of the preceding claims whereby when not in the non-dispensing condition the nozzle component is to be or is above a disc seal of the mouth of a container to which it is associated.

5. An assembly of any one of claims 1 to 3 wherein in the non-dispensing condition, a disc seal for a container for which the assembly is adapted is carried below the nozzle component and the second component within the first component.

6. An assembly of claim 5 wherein an interference fit with the first component provides peripheral releasable retention of the disc seal.

7. An assembly on any one of claims 4 to 6 wherein a lower periphery of the second component provides or can provide an annular seal on said disc seal.

8. An assembly as claimed in any one of the preceding claims wherein said once separated from at least the skirt is adapted to engage with said second component or skirt.

9. An assembly of claim 8 wherein said overcap is adapted to engage with the second component whereby the second component and the nozzle component, when in the non-dispensing condition, define together with the overcap a fully enclosed space about part of said nozzle component.

10. An assembly of any one of the proceeding claims wherein the skirt has a shoulder peripherally overlapping lapping as a hold down a complementary shoulder of the second component.

11. An assembly of any one of the preceding claims wherein the first component unitary moulding defines a tamper evident collar ("tamper band") dependent from said skirt and/or as an extension of the skirt.

12. **A capping assembly** engageable with or engaged with a necked container, said assembly being or having

a first component in the form of a unitary moulding adapted to define a detachable overcap and at least a skirt, the skirt being adapted to engage or engaging from above the exterior of the neck of a suitable said container,

a second component located within said first component from below,

a disc seal member located within said first component below said second component, and

a nozzle component carried through the second component yet

moveable relative to the second component such that,

in one relative condition (the "non-dispensing condition"), the nozzle component together with the surrounding second component, is adapted to provide closure of the mouth of a suitable said container or provides closure of the container, and

in another condition ("the dispensing condition") of the nozzle component relative to the second component, is adapted to provide for such a suitable said container, or provides for the container, a liquid egress passageway,

and wherein the second component and the nozzle component, when in or notionally considered in the non-dispensing condition, actually or notionally define together with the first component a fully enclosed space about part of said nozzle component,

and wherein the second component and the nozzle component, when in or notionally considered in the dispensing condition, together with the disc seal member and the first component actually or notionally fully enclose the nozzle component.

13. A capping assembly of claim 12 wherein the detachable overcap can after separation from the skirt can engage retainably the second component thereby, when the nozzle component and the second component are in the non-dispensing condition, to provide a closed space about the upper part of the nozzle component.

14. A capping assembly of claim 12 or 13 wherein the nozzle component shuttles only between limits of movement corresponding to the dispensing and non-dispensing conditions.

15. A capping assembly of claim 12 or 13 wherein said nozzle component and the second component has a said other condition beyond the shuttling limits of movement of the nozzle component between the dispensing and non-dispensing conditions.

16. A container closed by a capping assembly of any one of claims 12 to 15

herein the disc seal member interposed between said second component and the container provides a closed space about all of that part of said first component within which said nozzle component is disposed.

17. A container closed by a capping assembly of any one of claims 12 to 15 wherein said nozzle component with respect to said second component is in either a dispensing condition or some other condition that does not equate to the same condition as said non-dispensing condition, the dispensing and non-dispensing conditions being those conditions between which the nozzle component is adapted to shuttle.

18. **A closured container assembly** containing a liquid, said assembly comprising or including

a container with the liquid, the container having a neck with an open mouth,

a seal member over and sealing the open mouth, and

a closure assembly engaged to the container about the neck and extending over the seal member sealed mouth,

wherein the closure assembly is defined by

(i) a first moulding providing

(a) an overcap,

(b) a frangibly removable region or frangible connection ("frangible region") connecting to a lower periphery of the overcap,

(c) an internally threaded skirt connecting to the overcap via the frangible region, and

(d) (optionally) a tamper evident collar (e.g. "tamper band") severable from the internally threaded skirt,

(ii) a nozzle providing outlet component ("nozzle component"), and

(iii) an insert to hold the nozzle component so that it can be manually shuttled between a dispensing and non dispension condition relative thereto, said insert

(I) releasably retaining a or the lower periphery of the overcap, and

(II) peripherally sealing internally of the first moulding below the frangibly region and above the internally threaded region of the skirt,

and wherein when the seal member is no longer sealing the open mouth (whether through removal or rupture), in one condition (the dispensing condition), the nozzle component and insert component allows liquid egress and, in a second condition (the non-dispensing condition), the nozzle component and insert component allows at least substantially no liquid egress.

19. A closured container assembly as claimed in claim 18 wherein the liquid egress is first between part of the nozzle component and the insert and thereafter, after entry into at least one inlet in the nozzle out of an outlet of the nozzle.

20. A closured container assembly as claimed in claim 18 or 19 wherein the tamper evident collar is present and preferably it severs from the internally threaded skirt upon any substantial attempt to unscrew the threaded skirt from the externally threaded neck of the container.

21. A closured container assembly as claimed in any one of claims 18 to 20 wherein the seal member has been brought into juxtaposition prior to sealing the open mouth by having being carried by the first moulding, i.e. preferably the first moulding (i) includes or has included the seal member.

22. A closured container assembly as claimed in any one of claims 18 to 21 wherein provision is made for unscrewing the closure assembly from the container thereby to allow the peel removal of the seal member.

23. A closured container assembly comprising or including a necked container closed by a capping assembly of any one of claims 1 to 15.

24. **A method of closure of a container** so as to provide a closured container assembly as claimed in any one of claims 18 to 23, said method including the steps of applying a capping or closure assembly of any one of claims 1 to 15 to the container after filling the container at least to a substantial extent with a liquid and prior to, during or subsequent to such application sealing the or any disc seal or seal member to the mouth of the container.

25. A method of closure of a container as claimed in claim 24 wherein the sealing is by adhesive or induction welding after such application.

26. **A closured container assembly** containing or to contain a liquid, said assembly comprising or including

a container with the liquid, the container having an externally threaded neck with an open mouth, and

a closure assembly screw engaged to the container about the neck and extending over the mouth,

wherein the closure assembly is defined by

(i) a first moulding providing

(a) an overcap,

(b) a frangibly removable region or frangible connection ("frangible region") connecting to a lower periphery of the overcap,

(c) an internally threaded skirt connecting to the overcap via the frangibly region, and

(d) (optionally) a tamper evident collar severable from the internally threaded skirt,

(ii) an outlet component ("nozzle component"), and

(iii) an insert to hold the nozzle component so that it can be manually shuttled between (at least) a dispensing and non dispension condition relative thereto, said insert

(I) releasably retaining a or the lower periphery of the overcap, and

(II) peripherally sealing internally of the first moulding below the frangibly region and above the internally threaded region of the skirt,

and wherein in one condition (the dispensing condition), the nozzle component and insert component allows liquid egress and, in a second condition (the non-dispensing condition), the nozzle component and insert component allows at least substantially no liquid egress.

27. **An assembly** engageable with an externally threaded necked container, said assembly having (at least)

an overcap defining moulding having an extended skirt with an internal thread adapted to screw engage the external thread of a suitable said container,

an insert component retained or retainable by an array of splines, an array of splines of the overcap defining moulding or the overcap defining moulding, and

an outlet nozzle component carried by the insert and movable relative thereto between at least two conditions, and

(optionally) a seal member for the mouth of an appropriate complementary said container,

wherein the overcap defining moulding, insert component, nozzle component are preassembled or associated such that at least part of the nozzle component and at least some (preferably most or all) of the insert component is in a substantially enclosed space between part of the overcap defining moulding and the seal member yet the internal thread of the skirt can screw engage the

external thread of an appropriate complementary said container to have its mouth sealed by the seal member,

and wherein the overcap defining moulding defines an overcap frangibly detachable in a region of its skirt in a tamper evident manner from at least the insert component retaining region and the internally threaded region of its skirt,

and wherein, when so fitted to an appropriate said container, the overcap can be removed in a tamper evident manner thereby enabling the nozzle component to be moved relative to the insert to thereafter be capable of being shuttled between dispensing and non-dispensing conditions.

28. An assembly as claimed in claim 27 wherein the overcap defining member is moulded in a plastics material.

29. An assembly as claimed in claim 27 or 28 wherein a circular periphery of the insert component engages in a press fit, tight fit, welded, glued, or other manner with the interior of the overcap defining moulding.

30. An assembly as claimed in any one of claims 27 to 29 wherein that engagement for the purpose of retaining the insert component within the overcap prior to engagement thereof with a said container.

31. An assembly as claimed in any one of claims 27 to 30 wherein a peripheral lower region of the overcap part of the overcap defining moulding itself is engageable with a complementary part of the insert component such that after frangible detachment in a region of its skirt (in a tamper evident manner) the overcap can be removed therefrom and can, if desired, be replaced or relocated.

32. An assembly as claimed in claim 31 wherein the means of frangible detachment includes a peripheral tear strip between the lower extremity of the overcap part of the overcap defining moulding and that part of the skirt of the skirt.

33. An assembly as claimed in any one of claims 27 to 32 wherein the overcap defining moulding includes as a lower most extension of its skirt a collar defining region adapted to be frangibly detachable as a tamper evident collar or tamper band from that region of the skirt with the internal thread such that should there be unauthorised loosening of the assembly from an appropriate container there is a tamper evident separation of at least of the collar or tamper band from the remainder of the skirt.

34. **An assembly** engageable with or engaged with a necked container, said assembly having

an overcap defining moulding having an extended skirt with an internal means adapted to engage or engaging the exterior of the neck of a suitable said container,

an insert component retained or retainable by the overcap defining member to seal or sealing with the overcap defining moulding, and

a nozzle component carried by the insert and movable relative thereto between at least two conditions one of which effects a seal with the insert component to effect closure of a liquid passageway, and

(optionally yet preferably) a seal member for an otherwise open mouth of or of a said necked container carried in or having been carried in the overcap defining moulding and/or insert component.

35. **A capping assembly** engageable with a necked container, said assembly being or having

a first component in the form of a unitary moulding adapted to define a detachable overcap and at least a skirt, the skirt being threaded to engage the exterior of the neck of a suitable said container,

a second component located within said first component,

a nozzle component carried through the second component yet moveable relative to

the second component such that,

in one relative condition, the nozzle component together with the surrounding second component, is adapted to provide no liquid egress passageway (the "non-dispensing condition"), and

in another condition of the nozzle component relative to the second component, is adapted to provide a liquid egress passageway, and

a seal member ("disc seal") carried within the first component which provides at least substantial closure of the passageway,

wherein the second component and the nozzle component, when in the non-dispensing condition, define or could define together with the first component a fully enclosed space about part of said nozzle component,

and wherein said nozzle component is or can be wholly to one side of the disc seal.

36. **A method of providing a liquid dispensing assembly** having a container and a closure assembly with an overcap feature for a dispensing nozzle, said method comprising or including

filling said container having an externally threaded neck with a liquid, and

engaging with the external thread of the container a preassembled closure assembly to effect closure, the closure assembly having the following features:

(i) a first moulding providing

(a) an overcap,

(b) a frangibly region,

(c) an internally threaded skirt connecting the overcap by the frangibly region, and

(d) (optionally) a tamper evident collar dependent from the internally threaded skirt,

(ii) a nozzle providing outlet component ("nozzle component"), and

(iii) an insert to hold the nozzle component so that it can be manually shuttled between a dispensing and non dispension condition relative thereto, said insert

(I) being capable of releasably retaining a or the lower periphery of the overcap, and

(II) peripherally sealing internally of the first moulding below the frangibly region and above the internally threaded region of the skirt,

wherein optionally said tamper evident collar engages with complementary engagement means of the container such that should thereafter the assembly be unscrewed such collar will be retained or will rupture at least in part from the skirt,

and wherein in a tamper evident way the overcap can be released reliant on the frangible region.

37. A method of providing a liquid dispensing assembly as claimed in claim 36 wherein the preassembled closure assembly includes a seal member adapted to be juxtaposed over an open mouth of the container.

38. A method of providing a liquid dispensing assembly as claimed in claim 37 wherein said seal member seals to the container as a result of a welding or like procedure.

39. A method of providing a liquid dispensing assembly as claimed in claims 37 or 38 wherein said insert in any of the forms of the present invention substantially seals to the overcap defining moulding

40. **A one piece overcap moulding** having

an overcap region,

a internally threaded skirt region, and

a frangible link between the overcap and the threaded skirt region, and

(optionally) a tamper evident tamper band dependent from the threaded skirt region,

wherein there is no perforation in the overcap region, the threaded skirt region nor the frangible link.

41. **A one piece overcap moulding** of or for a drink dispensing container having

an overcap region,

a internally threaded skirt region, and

a frangible link between the overcap and the threaded skirt region, and

(optionally) a tamper evident tamper band dependent from the threaded skirt region

wherein where there is or is to be a fluid tight seal between the overcap and other closure assembly component(s) of and/or of the container itself), at least the overcap region and its frangible link to the internally threaded skirt region is or will be fluid tight.

42. A one piece overcap moulding as claimed in claim 41 wherein the frangible link is a band that completely circumvents or substantially completely circumvents below the bottom periphery of the overcap region (i.e. if it only substantially circumvents there may for the rest of the periphery be a simple frangible connection between the overcap region and part of the internally threaded skirt region).

43. A one piece overcap moulding as claimed in claim 41 or 42 wherein the bottom periphery of the overcap region internally includes a bead, lip, shoulder or the like adapted to act as a retention feature after separation.

44. **A one piece overcap moulding** having one or more or all of the features substantially as herein described with reference to any one or more of the accompanying drawings.

45. A capping assembly, closure assembly or closed container assembly substantially as herein described with reference to any one or more of the accompanying drawings.

46. As a combination or kit, apparatus of an assembly of any one of claims 1 to 15, 26 to 35, and 45.

DATED THIS 19th DAY OF December 2003
AJ PARK
PER
AGENTS FOR THE APPLICANT